

COMPUTER PROGRAM, METHOD, AND DEVICE FOR CONTROLLING THE
BRIGHTNESS OF A DISPLAY

5 RELATED APPLICATIONS

The present application is a continuation and claims priority benefit of U.S. Patent
Application No. 10/434,343, filed May 8, 2003, ² ^{US PAT NO 6703998} titled COMPUTER PROGRAM, METHOD,
AND DEVICE FOR CONTROLLING THE BRIGHTNESS OF A DISPLAY, incorporated by
specific reference herein, which is a continuation of ^{09/866,000,} U.S. Patent No. 6,590,561, filed May 26,
10 2001, titled COMPUTER PROGRAM, METHOD, AND DEVICE FOR CONTROLLING THE
BRIGHTNESS OF A DISPLAY, which is incorporated by specific reference herein.

BACKGROUND OF THE INVENTION

1. Field of the Invention

15 The present invention relates to displays used in electronic devices such as laptop
computers and avionics and marine equipment. More particularly, the invention relates to a
computer program and method for controlling the brightness of a display by proportionally
modifying the luminosity of each pixel in the display.

20 2. Description of the Prior Art

Thin-film transistor (TFT) liquid crystal displays (LCDs) and other types of
displays are commonly used in a variety of electronic devices, including laptop computers,
avionics and marine equipment, and global positioning satellite (GPS) receivers. Such displays
typically have back lights that may be adjusted to brighten the displays when used in bright light
25 and dim the displays when used in low light.

Adjusting the brightness of a back light to brighten or dim a display works well
in most applications; however, back lights can only be dimmed so much before they effectively
turn off entirely. Thus, once the lowest threshold of a back light has been reached, its display
cannot be effectively dimmed any further. Those skilled in the art will appreciate that it is often
30 desirable to dim a display beyond the lowest threshold of its back light in some environments
such as in the cockpit of an aircraft or boat at night.